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RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/559,867

DATE: 07/20/2001
 TIME: 14:19:36 2001

TECHNOLOGY CENTER 2800

Input Set : A:\600221nc.app
 Output Set: N:\CRF3\07202001\I559867.raw

3 <110> APPLICANT: Young, Michael W
 4 Kloss, Brian
 5 Blau, Justin
 6 Price, Jeffrey
 7 Takahashi, Joseph S.
 8 Philip, Lowrey L.
 10 <120> TITLE OF INVENTION: A NOVEL CLOCK GENE AND METHODS OF USE THEREOF
 12 <130> FILE REFERENCE: 600-1-221NCP
 C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/559,867
 C--> 15 <141> CURRENT FILING DATE: 2000-04-26
 17 <150> PRIOR APPLICATION NUMBER: 60/090,068
 18 <151> PRIOR FILING DATE: 1998-06-19
 20 <150> PRIOR APPLICATION NUMBER: 09/335,983
 21 <151> PRIOR FILING DATE: 1999-06-18
 23 <160> NUMBER OF SEQ ID NOS: 42
 25 <170> SOFTWARE: PatentIn Ver. 2.0
 27 <210> SEQ ID NO: 1
 28 <211> LENGTH: 1520
 29 <212> TYPE: DNA
 30 <213> ORGANISM: Drosophila melanogaster
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 35 cgttcggcga catctacctg ggcaccacga tcaacactgg cgaggagggtg gccatcaagc 180
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 41 gcaagaaggg caacctgggtg tacatcattg actttggcct ggccaagaaa ttccgcgatg 540
 42 cccggtcgct gaagcacatt cctatcggtg aaaacaagaa cctcacgggc actgcccgct 600
 43 atgctcccat caacacacat ttgggcattg agcaatcgcg tcgtgacgac ctggagtccc 660
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61 <211> LENGTH: 440
62 <212> TYPE: PRT
63 <213> ORGANISM: Drosophila melanogaster
65 <400> SEQUENCE: 2
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69 Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Thr Ile Asn Thr Gly
70      20      25      30
72 Glu Glu Val Ala Ile Lys Leu Glu Cys Ile Arg Thr Lys His Pro Gln
73      35      40      45
75 Leu His Ile Glu Ser Lys Phe Tyr Lys Thr Met Gln Gly Gly Ile Gly
76      50      55      60
78 Ile Pro Arg Ile Ile Trp Cys Gly Ser Glu Gly Asp Tyr Asn Val Met
79      65      70      75      80
81 Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
82      85      90      95
84 Ser Arg Arg Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
85      100     105     110
87 Ile Ser Arg Ile Asp Tyr Ile His Ser Arg Asp Phe Ile His Arg Asp
88      115     120     125
90 Ile Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
91      130     135     140
93 Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Phe Arg Asp Ala Arg
94      145     150     155     160
96 Ser Leu Lys His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
97      165     170     175
99 Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg
100     180     185     190
102 Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
103     195     200     205
105 Gly Ala Leu Pro Trp Gln Gly Leu Lys Ala Ala Asn Lys Arg Gln Lys
106     210     215     220
108 Tyr Glu Arg Ile Ser Glu Lys Lys Leu Ser Thr Ser Ile Val Val Leu
109     225     230     235     240
111 Cys Lys Gly Phe Pro Ser Glu Phe Val Asn Tyr Leu Asn Phe Cys Arg
112     245     250     255
114 Gln Met His Phe Asp Gln Arg Pro Asp Tyr Cys His Leu Arg Lys Leu
115     260     265     270
117 Phe Arg Asn Leu Phe His Arg Leu Gly Phe Thr Tyr Asp Tyr Val Phe
118     275     280     285
120 Asp Trp Asn Leu Leu Lys Phe Gly Gly Pro Arg Asn Pro Gln Ala Ile
121     290     295     300
123 Gln Gln Ala Gln Asp Gly Ala Asp Gly Gln Ala Gly His Asp Ala Val
124     305     310     315     320
126 Ala Ala Ala Ala Val Ala Ala Ala Ala Ala Ser Ser His Gln
127     325     330     335
129 Gln Gln Gln His Lys Val Asn Ala Ala Leu Gly Gly Gly Gly Gly Ser
130     340     345     350

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132 Arg Ala Gln Gln Gln Leu Gln Gly Gly Gln Thr Leu Ala Met Leu Gly
133      355      360      365
135 Gly Asn Gly Gly Gly Asn Gly Ser Gln Leu Ile Gly Gly Asn Gly Leu
136      370      375      380
138 Asn Met Asp Asp Ser Met Ala Ala Thr Asn Ser Ser Arg Pro Pro Tyr
139 385      390      395      400
141 Asp Thr Pro Glu Arg Arg Pro Ser Ile Arg Met Arg Gln Gly Gly Gly
142      405      410      415
144 Gly Gly Gly Gly Gly Val Gly Val Gly Gly Met Gln Ser Gly Gly Gly
145      420      425      430
147 Gly Gly Gly Val Gly Asn Ala Lys
148      435      440
152 <210> SEQ ID NO: 3
153 <211> LENGTH: 440
154 <212> TYPE: PRT
155 <213> ORGANISM: Drosophila melanogaster
157 <400> SEQUENCE: 3
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159 1      5      10      15
161 Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Thr Ile Asn Thr Gly
162      20      25      30
164 Glu Glu Val Ala Ile Lys Leu Glu Cys Ile Arg Thr Lys His Ser Gln
165      35      40      45
167 Leu His Ile Glu Ser Lys Phe Tyr Lys Thr Met Gln Gly Gly Ile Gly
168      50      55      60
170 Ile Pro Arg Ile Ile Trp Cys Gly Ser Glu Gly Asp Tyr Asn Val Met
171 65      70      75      80
173 Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
174      85      90      95
176 Ser Arg Arg Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
177      100      105      110
179 Ile Ser Arg Ile Asp Tyr Ile His Ser Arg Asp Phe Ile His Arg Asp
180      115      120      125
182 Ile Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
183      130      135      140
185 Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Phe Arg Asp Ala Arg
186 145      150      155      160
188 Ser Leu Lys His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
189      165      170      175
191 Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg
192      180      185      190
194 Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
195      195      200      205
197 Gly Ala Leu Pro Trp Gln Gly Leu Lys Ala Ala Asn Lys Arg Gln Lys
198      210      215      220
200 Tyr Glu Arg Ile Ser Glu Lys Lys Leu Ser Thr Ser Ile Val Val Leu
201 225      230      235      240
203 Cys Lys Gly Phe Pro Ser Glu Phe Val Asn Tyr Leu Asn Phe Cys Arg
204      245      250      255

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206 Gln Met His Phe Asp Gln Arg Pro Asp Tyr Cys His Leu Arg Lys Leu
207          260          265          270
209 Phe Arg Asn Leu Phe His Arg Leu Gly Phe Thr Tyr Asp Tyr Val Phe
210          275          280          285
212 Asp Trp Asn Leu Leu Lys Phe Gly Gly Pro Arg Asn Pro Gln Ala Ile
213          290          295          300
215 Gln Gln Ala Gln Asp Gly Ala Asp Gly Gln Ala Gly His Asp Ala Val
216 305          310          315          320
218 Ala Ala Ala Ala Val Ala Ala Ala Ala Ala Ala Ser Ser His Gln
219          325          330          335
221 Gln Gln Gln His Lys Val Asn Ala Ala Leu Gly Gly Gly Gly Ser
222          340          345          350
224 Arg Ala Gln Gln Gln Leu Gln Gly Gly Gln Thr Leu Ala Met Leu Gly
225          355          360          365
227 Gly Asn Gly Gly Gly Asn Gly Ser Gln Leu Ile Gly Gly Asn Gly Leu
228          370          375          380
230 Asn Met Asp Asp Ser Met Ala Ala Thr Asn Ser Ser Arg Pro Pro Tyr
231 385          390          395          400
233 Asp Thr Pro Glu Arg Arg Pro Ser Ile Arg Met Arg Gln Gly Gly Gly
234          405          410          415
236 Gly Gly Gly Gly Gly Val Gly Val Gly Gly Met Gln Ser Gly Gly Gly
237          420          425          430
239 Gly Gly Gly Val Gly Asn Ala Lys
240          435          440
243 <210> SEQ ID NO: 4
244 <211> LENGTH: 440
245 <212> TYPE: PRT
246 <213> ORGANISM: Drosophila melanogaster
248 <400> SEQUENCE: 4
249 Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly
250 1          5          10          15
252 Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Thr Ile Asn Thr Gly
253          20          25          30
255 Glu Glu Val Ala Ile Lys Leu Glu Cys Ile Arg Thr Lys His Pro Gln
256          35          40          45
258 Leu His Ile Glu Ser Lys Phe Tyr Lys Thr Met Gln Gly Gly Ile Gly
259          50          55          60
261 Ile Pro Arg Ile Ile Trp Cys Gly Ser Glu Gly Asp Tyr Asn Val Ile
262 65          70          75          80
264 Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
265          85          90          95
267 Ser Arg Arg Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met
268          100          105          110
270 Ile Ser Arg Ile Asp Tyr Ile His Ser Arg Asp Phe Ile His Arg Asp
271          115          120          125
273 Ile Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu
274          130          135          140
276 Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Phe Arg Asp Ala Arg
277 145          150          155          160

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279 Ser Leu Lys His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
280      165      170      175
282 Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg
283      180      185      190
285 Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
286      195      200      205
288 Gly Ala Leu Pro Trp Gln Gly Leu Lys Ala Ala Asn Lys Arg Gln Lys
289      210      215      220
291 Tyr Glu Arg Ile Ser Glu Lys Lys Leu Ser Thr Ser Ile Val Val Leu
292 225      230      235      240
294 Cys Lys Gly Phe Pro Ser Glu Phe Val Asn Tyr Leu Asn Phe Cys Arg
295      245      250      255
297 Gln Met His Phe Asp Gln Arg Pro Asp Tyr Cys His Leu Arg Lys Leu
298      260      265      270
300 Phe Arg Asn Leu Phe His Arg Leu Gly Phe Thr Tyr Asp Tyr Val Phe
301      275      280      285
303 Asp Trp Asn Leu Leu Lys Phe Gly Gly Pro Arg Asn Pro Gln Ala Ile
304      290      295      300
306 Gln Gln Ala Gln Asp Gly Ala Asp Gly Gln Ala Gly His Asp Ala Val
307 305      310      315      320
309 Ala Ala Ala Ala Ala Val Ala Ala Ala Ala Ala Ala Ser Ser His Gln
310      325      330      335
312 Gln Gln Gln His Lys Val Asn Ala Ala Leu Gly Gly Gly Gly Gly Ser
313      340      345      350
315 Arg Ala Gln Gln Gln Leu Gln Gly Gln Thr Leu Ala Met Leu Gly
316      355      360      365
318 Gly Asn Gly Gly Gly Asn Gly Ser Gln Leu Ile Gly Gly Asn Gly Leu
319      370      375      380
321 Asn Met Asp Asp Ser Met Ala Ala Thr Asn Ser Ser Arg Pro Pro Tyr
322 385      390      395      400
324 Asp Thr Pro Glu Arg Arg Pro Ser Ile Arg Met Arg Gln Gly Gly Gly
325      405      410      415
327 Gly Gly Gly Gly Gly Val Gly Val Gly Gly Met Gln Ser Gly Gly Gly
328      420      425      430
330 Gly Gly Gly Val Gly Asn Ala Lys
331      435      440
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335 <211> LENGTH: 72
336 <212> TYPE: DNA
337 <213> ORGANISM: Drosophila melanogaster
339 <400> SEQUENCE: 5
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341 gtggccatca ag 72
343 <210> SEQ ID NO: 6
344 <211> LENGTH: 24
345 <212> TYPE: PRT
346 <213> ORGANISM: Drosophila melanogaster
348 <400> SEQUENCE: 6
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FYI:

Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

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L:14 M:270 C: Current Application Number differs, Replaced Current Application Number

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:1348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40